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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/519,510

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9230

27387 7590 08/08/2008  
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EXAMINER

JANAKIRAMAN, NITHYA

ART UNIT

PAPER NUMBER

2123

MAIL DATE

DELIVERY MODE

08/08/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/519,510	<b>Applicant(s)</b> HASE ET AL.	
	<b>Examiner</b> NITHYA JANAKIRAMAN	<b>Art Unit</b> 2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 06 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 2-4,6-9,11-15,17-19,22-24 and 26-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-4,6-9,11-15,17-19,22-24 and 26-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/2/05 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/10/2008</u> .   | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

This action is in response to the submission filed on 5/6/2008. Claims 2-4, 6-9, 11-15, 17-19, 22-24, and 26-33 are presented for examination.

#### ***Response to Arguments- 35 U.S.C. §103***

1. Applicant's arguments filed 5/6/2008 have been fully considered but they are not persuasive.

#### **Argument 1:**

2. Applicant argues on pages 13-19 that Brown and Strader do not teach various limitations of the independent claims, specifically limitations c), g), h), and i). Please see below for a line by line claim rejection.

#### **Argument 2:**

3. Applicant argues on page 13 that Brown does not teach a “step of generating an updated demand quantity for a second forecast period as required by claims 18, 19, 22 and 29”.

4. As shown in Figure 8, the process occurs in a loop, allowing the ordering of goods, or the demand, to be updating an infinite number of forecast periods. Rejection maintained.

#### **Argument 3:**

5. Applicant argues on page 17 that Brown does not "match customer order for finished goods with actual customer orders to generate customized order data which are transferred to the production sites as required by claims 18, 19, 22 and 29”.

6. As shown in Figure 3, the modified orders for Figure 1 generate actual orders (M1, and M2). Strader is used for teaching that customized orders with actual dealer specifications can be used. Rejection maintained.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2-4, 6-9, 11-15, 17-19, 22-24, and 26-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 94/01826 (hereinafter Brown), in view of "Simulation of Order Fulfillment in Divergent Assembly Supply Chains" (hereinafter Strader).

8. Brown discloses a method of simulating supply chain management and material production (*see page 3, lines 17-24*). However, Brown does not disclose that the material, or product, can be available in a plurality of versions with a plurality of selectable features.

9. Strader discloses the concept of customizable products, and the "make-to-order" strategy (*see page 13, section 4.20*).

10. Brown and Strader are analogous art because they are both related to the field of supply chain management and order processing.

11. Therefore, it would have obvious to one having ordinary skill in the art to combine the product customization of Strader with the simulation of order processing of Brown, because

Art Unit: 2123

"supply chains have a primary business objective of product customization to fulfill customer orders" (*Strader, section 4.22*).

12. Regarding claim 22 (18 and 19), Brown and Strader teach:

Method for simulating order processing processes (*Brown: page 3, "simulates the production of materials given inventories and orders to outside suppliers"*) used for producing a product available in a plurality of versions or a plurality of selectable features (*Strader: 4.20, "customized products...make-to-order strategy can be applied to high-customization firms"*) comprising the steps:

a) entering into a data processing device demand quantities for at least one class of the product for at least one predefined first forecast period of time (*Brown: page 6, line 18 "facility receives...orders", lines 17-24; page 10, line 23, "due date"*), wherein the demand quantities specify at least one of a version and a feature of a product (*Strader: 4.20, "customized products...make-to-order strategy can be applied to high-customization firms"*);

b) automatically adjusting, through use of a computer program installed on a data processing device, the demand quantities with predefined datasets representative of at least one of manufacturing capacities and supplier capacities (*Brown: page 16, lines 1-10, "modify the data"*), and determining at least one of approved firm order allocations and approved modular allocations; (*Brown: Figure 8, 830, "modify data"*);

c) generating updated demand quantities for a predefined second forecast time period by

Art Unit: 2123

evaluating the adjusted demand quantities for the first period and at least one of the approved firm order allocations, the approved modular allocations and simulated buyer orders newly received by dealers (*Brown: page 16, lines 1-10; Figure 8, 830*);

d) adjusting the updated demand quantities with respect to restrictions of at least one of production sites and suppliers, and automatically allocating at least a portion of the adjusted updated demand quantities to the production sites (*Brown: page 9, lines 19-28, "Capacity Resource Planning", "supplier schedule to satisfy these orders"*);

e) simulating at least one of production and supply for the production based on the allocation in step (d) (*Brown: page 3, lines 17-20, "simulates the production of materials given inventories and orders to outside suppliers"*);

f) automatically determining distribution channels and simulating distribution of finished products from the production sites to delivery locations (*Brown: page 9, "Capacity Resource Planning"; page 3, lines 17-20, "simulates the production of materials given inventories and orders to outside suppliers"*);

g) matching the adjusted, updated demand quantities with at least one of an actual customer order of a finished product and an actual dealer specification of a finished product (*Strader: 4.20, "customized products...make-to-order strategy can be applied to high-customization firms"*), wherein the at least one of the actual customer order and the actual dealer specification is

Art Unit: 2123

assigned to a matching, adjusted, updated demand quantity not yet assigned to an actual customer order or an actual dealer specification wherein the matching, adjusted, updated demand quantity assigned to the actual customer order of the finished product is converted into an individual order which completely specifies the finished product (*Brown: the modified order (orders for FG1) generates actual orders (M1, M2) as seen in Figure 3, element 310.1*);

h) generating customized order data representative of at least the adjusted, updated demand quantities assigned to the at least one actual customer order and actual dealer specification (*Brown: the modified order (orders for FG1) generates actual orders (M1, M2) as seen in Figure 3, element 310.1*); and

i) outputting the customized order data to the production sites (*Brown: page 5, line 2, lines 10-13; page 6, lines 17-20; necessarily, data would be sent to the manufacturing facility in order to create FG1 and FG2*).

13. Regarding claim 2, Brown and Strader teach:

Method according to claim 22, characterized in that the data sets used in the automatic adjustment of the demand quantities in step b) include restrictions with respect to at least one of the production sites and the suppliers (*Brown: page 9, lines 19-28*).

14. Regarding claim 3, Brown and Strader teach:

Art Unit: 2123

Method according to claim 22, characterized in that the demand quantities in step a) are determined by defining a first demand forecast for a first forecast time period, determining a second demand forecast for a second forecast time period by using stochastic processes derived from the first forecast, and determining the demand quantities according to predefined algorithms which evaluate at least one of the first and the second demand forecasts (*Brown: page 6, lines 11-24*).

15. Regarding claim 4, Brown and Strader teach:

Method according to claim 22, characterized in that the automatic adjustment in step b) includes a correction of the demand quantities so as to match the demand quantities to at least one of the manufacturing capacities and the supplier capacities (*Brown: page 9, lines 19-23*).

16. Regarding claim 6, Brown and Strader teach:

Method according to claim 22, characterized in that the generating of the updated demand numbers for the predefined time period includes evaluating daily assumptions (*Brown: page 16, lines 5-10*).

17. Regarding claim 7, Brown and Strader teach:

Method according to claim 22, characterized in that the automatic allocation of the portion of the updated demand quantities to the production sites includes compiling daily schedules for the production sites (*Brown: page 10, lines 17-18*).



18. Regarding claim 8, Brown and Strader teach:

Method according to claim 6, characterized in that the automatic allocation of the portion of the updated demand quantities to the production sites includes breaking up the products specified in the daily assumptions into their modules (*Brown: Figure 1, FG2*).

19. Regarding claim 9, Brown and Strader teach:

Method according to claim 22, characterized in that the updated demand quantities include information about an significant equipment feature of the products (*Brown: page 10, lines 17-27, "inventory parts"*).

20. Regarding claim 11, Brown and Strader teach:

Method according to claim 22, characterized in that, in step (d), the restrictions of the productions sites include at least one of capacity limitations, work schedule models, and permanent staffing (*Brown: page 10, line 22, "overloaded"*).

21. Regarding claim 12, Brown and Strader teach:

Method according to claim 1, characterized in that dealers include domestic market dealers and importers (*Brown: page 2, lines 5-9*).

22. Regarding claim 13, Brown and Strader teach:

Method according to claim 22, characterized in that the distribution channels are subdivided into distribution sub-channels (*Brown: page 3, lines 17-24*).

23. Regarding claim 14, Brown and Strader teach:

Method according to claim 1, characterized in that the generating of the updated demand quantities is based on at least one of quantitative evaluations of process designs, assessments of strategies, times for freezing orders, delivery times, delivery reliability, utilization of transportation means and costs (*Brown: page 9, lines 19-28*).

24. Regarding claim 15, Brown and Strader teach:

Method according to claims 22, characterized in that in step (c), the evaluating is performed using data obtained from databases of real systems (*Brown: page 9, lines 19-28*).

25. Regarding claim 17, Brown and Strader teach:

Simulation system according to claim 29, characterized in that the simulation system includes interfaces to databases of real systems (*Brown: page 9, lines 19-28*).

26. Regarding claim 23, Brown and Strader teach:

Method according to claim 22, where the product is a motor vehicle (*page 3, inherently the materials can make up any product, including motor vehicles*).

27. Regarding claim 24, Brown and Strader teach:

Art Unit: 2123

Method according to claim 22, where customized order data comprises freeze point data, where a freeze point is a latest possible date when a change to at least one of the customer orders and the dealer specifications is insertable in a production process (*Brown: page 20, lines 1-17*).

28. Regarding claim 26, Brown and Strader teach:

Method according to claim 25, wherein the first forecast time period is a year of sales, the second forecast time period is three months and the predefined time period is a delivery week (*Brown: page 6, lines 11-16; inherently, the schedules can be any length*).

29. Regarding claim 27, Brown and Strader teach:

Method according to claim 14, wherein the assessments of strategies include managing disruptions (*Brown: page 10, lines 17-34*).

30. Regarding claim 28, Brown and Strader teach:

Method according to claim 15, wherein the databases of real systems include databases of at least one of the dealers and production sites (*Brown: page 9, lines 19-30*).

31. Regarding claim 29, Brown and Strader teach:

A simulation system for simulating order processing processes used for producing a product (*Brown: page 3, lines 17-20*) available in a plurality of versions or a plurality of selectable features (*Strader: 4.20, "customized products...make-to-order strategy can be applied to high-customization firms"*), the system comprising:

a forecast module, a production module, a distribution module and an assumption module under control of a computer program implemented on a computer system (*Brown: page 4, lines 1-32*), wherein the forecast module is for:

receiving demand quantities for at least one class of the product for at least one predefined period of time (*Brown: page 6, line 18 “facility receives...orders”, lines 17-24; page 10, line 23, “due date”*);

automatically adjusting the demand quantities with predefined datasets representative of at least one of manufacturing capacities and supplier capacities, and determining at least one of approved firm order allocations and approved modular allocations (*Brown: page 16, lines 1-10, “modify the data”*);

generating updated demand quantities for the predefined time period by evaluating at least one of the approved firm order allocations, the approved modular allocations and simulated buyer orders newly received by dealers (*Brown: page 16, lines 1-10; Figure 8, 830*); and

adjusting the updated demand quantities with respect to restrictions of at least one of production sites and suppliers, and automatically allocating at least a portion of the updated demand quantities to the production sites (*Brown: page 9, lines 19-28, “Capacity Resource Planning”, “supplier schedule to satisfy these orders”*);

wherein the production module is for simulating at least one of production and supply for the production based on the allocating performed in the forecast module (*Brown: page 3, lines 17-20, “simulates the production of materials given inventories and orders to outside suppliers”*);

wherein the distribution module is for automatically determining distribution channels and simulating distribution of finished products from the production sites to delivery locations (*Brown: page 31, lines 7-12*); and

wherein the assumption module is for matching the adjusted, updated demand quantities with at least one of an actual customer order of a finished product and an actual dealer specification of a finished product, wherein the at least one of the actual customer order and the actual dealer specification is assigned to a matching, adjusted, updated demand quantity not yet assigned to an actual customer order or an actual dealer specification, wherein the matching, adjusted, updated demand quantity assigned to the actual customer order of the finished product is converted into an individual order which completely specifies the finished product (*Brown: the modified order (orders for FG1) generates actual orders (M1, M2) as seen in Figure 3, element 310.1*);

generating customized order data representative of at least the adjusted, updated demand quantities assigned to the at least one actual customer order and actual dealer specification (*Brown: the modified order (orders for FG1) generates actual orders (M1, M2) as seen in Figure 3, element 310.1*); and

outputting the customized order data to the production sites (*Brown: page 5, line 2, lines 10-13; page 6, lines 17-20; necessarily, data would be sent to the manufacturing facility in order to create **FG1** and **FG2***).

32. Regarding claim 30, Brown and Strader teach:

Simulation system according to claim 17, wherein the databases of real systems includes databases of at least one of the dealers and production sites (*Brown: page 9, lines 19-30*).

33. Regarding claim 31 (and 32), Brown and Strader teach:

The computer program product of claim 18, wherein the process for simulating order processing processes is for producing a motor vehicle (*Brown: page 3, lines 17-24, inherently, a motor vehicle is a possible product in Brown*).

34. Regarding claim 33, Brown and Strader teach:

The method of claim 22, wherein the matching of step g) further comprises:

comparing the at least one of the actual customer order and the actual dealer specification (*Strader: 4.20, "customized products...make-to-order strategy can be applied to high-customization firms"*), in the reverse order that the dealers receive the at least one of the actual customer order and the actual dealer specification, with the adjusted, updated demand quantities not yet assigned to an actual customer order or an actual dealer specification (*Brown: the*

*modified order (orders for FG1) generates actual orders (M1, M2) as seen in Figure 3, element 310.1).*

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NITHYA JANAKIRAMAN whose telephone number is (571)270-1003. The examiner can normally be reached on Monday-Thursday, 8:00am-5:00pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez can be reached on (571)272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nithya Janakiraman/  
Examiner, Art Unit 2123

/NJ/

/Paul L Rodriguez/  
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